



# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

m/451021

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April 3, 2002

TO: Minerals File

FROM: Doug Jensen, Senior Reclamation Specialist *D Jensen*

RE: Site Inspection, Quarry Antone & Little Mountain Quarries, M/045/005 & M/045/021, Tooele County, Utah

Date of Inspection: March 27, 2002  
Time of Inspection: 1:00 P.M.  
Conditions: Clear, Sunny & Breezy  
Participants: Harry Philip, Greg Morical, Rod Simmons - Lone Star Industries; Mike Malmquist - PB&L; Brian Buck - JBR, Tom Munson, Doug Jensen - UDOGM

## **Purpose of Inspection: Review Inactive Status & Bond Adequacy of Sites**

### **Background:**

The inspection of these sites was a result of a Division letter requesting updated information needed for escalation of the bonds presently being held for each site. This letter also stated that because these sites had been inactive for a period beyond that which requires reclamation (ten years) the Division requested a written response explaining why the Division should not require immediate reclamation of both sites.

Lone Star has requested an additional five-year extension (letter attached) of the rule requiring reclamation of these sites (the sites have been inactive since 1988). The company is requesting this extension to allow the company to evaluate the future potential of these properties. Future plans for Lone Star may include the construction of a cement plant in this area. If these plans come into fruition these two sites would provide essential feedstock for these plant

JBR Environmental Consultants, Inc was retained by Lone Star to check the bond estimates calculated for these two sites and recalculate the costs to today's equipment and labor costs. A bond amount for each site was calculated using the Means cost index. The amount to reclaim the Little Mountain Quarry was \$59,055 and Quarry Antone was \$44,494. These costs do not include an escalation factor used by the Division to account for inflation during the term of the bond (5 years).

Bond amounts have been calculated by the Division utilizing cost and labor factors furnished by JBR. A copy of these surety estimates are attached.

**Observations:**

The first site visited was the Quarry Antone. The pit at this site was formed by utilizing a slot type method of mining, the slot is ~ 30 feet wide at the floor. A limestone bedding plane standing at ~70 degrees forms the south highwall of the slot and is very stable. The north highwall is formed of a shale and stands at ~ 80 degrees and does show signs of minor spalling. There is one small dump located on the site that has become overgrown with rabbit brush. The entire site with the exception of the pit bottom, the highwalls, a small push-up area and the access road has naturally revegetated itself and the site shows no evidence of erosion problems.

Little Mountain Quarry was visited next. This site is also appears to be very stable. The mining method used at this site is removal of a hillside. A limestone bedding plane standing at ~70 degrees form a very stable highwall at this quarry.

There are two waste disposal areas associated with this quarry; the dump slopes on each area have become naturally revegetated since the site became inactive. The quarry highwall, floor, the stock pile area, a small silt pond and the access road are the only areas at the site that have not become overgrown since this mining area became inactive. These features form a small portion (~4 to 5 acres) of the overall disturbance associated with this site.

**Conclusions and Recommendations:**

Both sites appear very stable with no slope stability or erosion problems. Due to lack of any mining activity since 1988, much of the disturbed areas at both sites have become naturally revegetated.

Allowing these sites to remain for an additional five-year period should not result in any significant onsite or offsite environmental impacts or public health and safety concerns to the surrounding area.

.jb

Attachment: Lone Star request letter

cc. Harry Philip, Lone Star

Mike Malmquist, PB&L

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# **LONE STAR INDUSTRIES, INC.**

10401 N. Meridian St., Suite 400  
Indianapolis, IN 46290  
317-706-3300

March 18, 2002

D. Wayne Hedberg  
Permit Supervisor  
Mineral Regulatory Program  
Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

**RECEIVED**

MAR 23 2002

DIVISION OF  
OIL, GAS AND MINING

Re: Antone Quarry (M/045/021) and Little Mountain Quarry (M/045/005)

Dear Wayne:

This letter serves four purposes. First, it explains the circumstances behind Lone Star Industries, Inc. (Lone Star) delayed request for extension of the permits for the above-referenced mines. Second, it documents the recent course of dealings between Lone Star and your office, the Division of Oil, Gas and Mining (Division) regarding the two mines, and particularly regarding efforts to extend the mining permits and update the reclamation bonds. Third, it includes updated estimates of reclamation costs prepared by Lone Star and its consultant, JBR Environmental (JBR), for your review and consideration as the basis for new or supplemental reclamation bonds for the two mines. And fourth, it requests that the Division extend the mining permits for the two mines for an additional five-year term.

As you know, these four topics have been the subject of a series of phone conversations and written and e-mail correspondence between representatives of Lone Star and your office over the last several months. By mutual agreement, Lone Star is summarizing those discussions in this letter, and formally requesting extension of Lone Star's permits. Lone Star understands that the Division is not likely to make a decision on this request until after a site visit, which may not be possible for a few weeks or months due to winter conditions.

## Delayed Extension Request

As you know, by letter of April 3, 2001 the Division notified Lone Star that it had reviewed the status of the Antone and Little Mountain mines and determined they had been inactive since 1988, a period of more than 10 years, and that under Division regulations Lone Star was required to make a showing as to why the mines should continue to be held in suspended status and not

reclaimed. The primary reason that Lone Star did not make such a showing prior to or during 1999 (or 2001) was that during the relevant time period, Lone Star underwent a major corporate reorganization which led to a move of corporate headquarters from Stamford, Connecticut to Indianapolis, Indiana, and to a significant downsizing and change of personnel. In the process, the staff person responsible for Lone Star's Utah properties left the company and some of the relevant files for those properties were lost. In effect, during the period of corporate transition, Lone Star lost track of the status of the Utah properties during the relevant time period.

### Recent Course of Dealings

By letter dated May 14, 2001, Lone Star responded to the Division by acknowledging receipt of the Division's April 3<sup>rd</sup> letter and informing the Division that Lone Star would institute a review of the mines' status so that it could respond to the Division's request. In July 2001, Lone Star wrote the Division twice, once to pay the annual permit fee for the two mines (July 3<sup>rd</sup>), and once to request a copy of the Division's permit files for the mines because Lone Star's initial review indicated that its files were incomplete (July 6<sup>th</sup>). Following receipt and review of the files, Lone Star retained local counsel and contacted your office to set up a meeting and site visit as a first step in the process for extension of the mine permits, as confirmed by Lone Star in a letter to your office dated October 30, 2001.

A meeting and site visit with Division staff was then scheduled but was postponed by mutual agreement due to the onset of winter conditions. In the meantime, your staff requested that pending rescheduling of the meeting and site visit (which depends on the onset of spring conditions), Lone Star should review the reclamation plans and prepare updated reclamation cost estimates for the mines, for consideration by the Division. In response, Lone Star retained JBR Environmental, a local engineering firm, and performed the requested reclamation cost review, which is discussed below.

As you know, during the period of the above-referenced written correspondence there were also several e-mail and phone contacts between Lone Star with you and your staff regarding these same issues.

### Updated Reclamation Cost Estimates

Currently, the Division holds reclamation bonds posted by Lone Star for the Antone Quarry mine in the amount of \$34,400, and for the Little Mountain Quarry mine in the amount of \$56,200. For the Antone Quarry mine bond, the cost estimate prior to application of the 5-year escalation factor was \$29,700. For the Little Mountain Quarry mine bond, the pre-escalation cost estimate was \$45,791.

Lone Star and JBR have reviewed the reclamation plans and the existing cost estimates and have calculated updated estimates using unit costs based on current construction estimating guidebooks and recent contractor estimates. The justification for the updated cost estimates, and a comparison to the existing estimates, is provided in Attachment 1 to this letter. In general, the updated estimates utilize the same equipment and quantities that were used for the existing bonds, with specified exceptions. For example, it was determined that the prior estimate did not

include cost estimates for highwall monitoring, revegetation monitoring and reporting, contingencies, and mobilization costs, so estimates were made for these items and added into the total. In addition, the cost estimate for fencing was adjusted to account for what appears to have been an error in the original calculation of the amount of fencing that would be required.

Based on these and other considerations detailed in Attachment 1, the updated reclamation cost estimate for the Antone Quarry mine is \$44,494; applying the Division's current escalation rate of 3.12%, the 5-year escalated reclamation estimate is \$51,882. The updated reclamation cost estimate for the Little Mountain Quarry mine is \$59,055; applying the Division's current escalation rate of 3.12%, the 5-year escalated reclamation estimate is \$68,861.

These are the updated, escalated reclamation cost estimate amounts that Lone Star proposes for bonding purposes for the two mines: \$51,882 for the Antone Quarry mine and \$68,861 for the Little Mountain Quarry mine.

#### Extension of Mine Permits

Lone Star requests that the Division extend the mining permits for the two properties, in suspended status. In its current round of strategic planning, Lone Star is considering constructing a cement plant in Tooele within the next five years, using one or both of the subject properties to supply necessary stone to the plants. As you know, Tooele County is one of the fastest growing areas in Utah, and Lone Star believes this growth presents significant potential for the reopening and use of the mines. Lone Star also understands that some of the existing quarries and pits that serve as sources for cement plants in the area are nearing depletion or are in areas where continued county zoning approvals are somewhat uncertain, which should provide opportunities to supply those facilities with stone from the two properties.

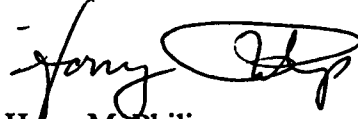
In addition, Lone Star has recently been approached by a third party with a proposal to mine clay or shale from either or both of the mines, under a joint venture or similar arrangement. If an agreement can be reached with this party, and if the material turns out to be of commercial grade, active mining could be a possibility in the relatively near future.

Based on the above, Lone Star requests that the Division extend its permits for the Antone and Little Mountain mines, said mines and permits to be in "inactive" status for the time being. In connection with the same, Lone Star proposes that the bond amounts for the two properties be increased to the amounts specified above (\$51,882 for the Antone mine and \$68,861 for the Little Mountain mine), which Lone Star would accomplish through the posting of a replacement bond or the posting of a supplemental bond or bond rider with the Division for each mine.

Lone Star understands that prior to making a decision on permit renewal, the Division still desires to conduct a field inspection of the two mines with Lone Star personnel, in order to ensure there are no problematic conditions at the site. Lone Star agrees this would be appropriate and stands ready to join the Division in such an inspection, once the site becomes accessible and the snow cover has thinned to the point where meaningful observation of the mines can be made.

Thank you for your consideration of this letter and of Lone Star's request for extension of its mine permits. We look forward to working with you and your office in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Harry M. Philip", with a large, stylized circular flourish at the end.

Harry M. Philip  
Vice President Manufacturing Services

March 7, 2002

Mr. Harry Philip  
Vice President or Manufacturing Services  
Lone Star Industries, Inc.  
10401 N. Meridian Street  
Indianapolis, IN 46290

RE: Little Mountain and Antone Quarries, Tooele County, Utah

Dear Mr. Philip:

We have completed our review of the reclamation plan files for the Little Mountain and Antone quarries in Tooele County, Utah. We reviewed the reclamation plans against the current Utah Division of Oil, Gas, and Mining regulations (DOGM) (Rule R647-4. Large Mining Operations), to identify any regulatory issues that might need to be addressed at this time if Lone Star Industries intends to extend life of these permits. We also updated the reclamation cost estimates. The following items were noteworthy for review in this report:

1. We do not see any deficiencies in the approved mining and reclamation plans that would need to be changed before submitting a revised reclamation cost estimate to DOGM.
2. We prepared the attached cost estimates using the same quantities and methods last used by Lone Star. The tables show the previous cost estimate prepared for each property and the new one. We also show the existing bond amount for each property. The second sheet of the estimate provides some explanatory information. We have generally kept the equipment and quantities the same as the previous estimates but have updated the unit costs based on current construction estimating guidebooks and recent contractor estimates.
3. Both the Little Mountain and Antone permits include a variance from R647-4-111.7 which allows highwall slopes at the quarries to be left at an angle steeper than 45 degrees. The variance requests discussed monitoring the highwalls on a periodic basis. The previous estimates did not include an allowance for this monitoring activity. We have included three annual survey events to accomplish this monitoring in our new cost estimates.
4. Rule R647-4-111.13 describes the general revegetation requirements for successful reclamation and indicates that the revegetation must meet certain characteristics three years following the reclamation before DOGM will consider the reclamation complete. This would require a revegetation inspection and report to

DOGM in the third year following the seeding for each property. We have included \$1,200 for this in our new cost estimates for each site.

5. The past fencing estimate for Little Mountain showed 8,078 linear feet being required although the permit area boundary is about 4,500 linear feet long. From inspection of the maps for this site we cannot determine why the larger quantity of fencing was included in the previous cost estimate. We have used the smaller quantity in our new reclamation cost estimate.
6. DOGM typically includes a contingency amount in reclamation cost estimates to cover unexpected costs. This was done for the previous Antone reclamation cost estimate but not for the Little Mountain one. We have included a 10% contingency for both new cost estimates.
7. The previous reclamation cost estimates did not include any costs for mobilization of the equipment to the sites. This may be appropriate for active mines with equipment on site at the end of operations but for the current inactive condition of both quarries, we think a moderate mob/demob cost is appropriate and \$1,000 for this has been added to the new cost estimates for each site.

The second sheet of the estimate provides descriptions of the reasons why we selected the unit costs used in our new cost estimates.

Please let me know if you have any questions or comments on this information.

Best Regards,



Brian W. Buck  
Vice President

cc: M. Malmquist, PB&L  
B. Fuller, JBR

encl.

LITTLE MOUNTAIN COST ESTIMATE									
		hours	other	units	Original Estimate 1985		Present Estimate 2002		Equipment
					\$/unit	cost \$	\$/unit	cost \$	
A	Cleanup/removal of structures	40			324.45	12,978	344.20	13,768	dozer, loader
B	Backfill, grading, contouring	24			362.70	8,705	366.10	8,786	dozer, grader
C	Topsoil distribution	8			142.45	1,140	146.50	1,172	loader
D	Revegetation		20	acres	251.70	5,034	365.00	7,300	Tiller, disc, seeder, tractor
E	Safety & fencing		8078	(A) lin. ft.	2.00	16,256	3.08	13,860	
			4500	(B)					
F	Seed + fertilizer		20	acres	83.90	1,678	210.00	4,200	seed and fertilizer
G	mob/demob				0.00	0	Lump Sum	1,000	
H	Post mining monitoring				0.00	0	Lump Sum	3,600	3 yrs surveying and revegetation inspect.
	SUBTOTAL					45,791		53,686	
I	Contingency (10%)				0.00	0		5,369	
	TOTAL					45,791		59,055	

Current bond being held 56,200

NOTE A - linear feet of fencing used in 1985 estimate

NOTE B - linear feet of fencing used in 2002 estimate

ANTONE COST ESTIMATE									
		hours	other	units	Original study 1987		Present study 2002		
					\$/unit	cost	\$/unit	cost	
A	Dozer	40			125.00	5,000	197.71	7,908	dozer
B	Cat 950 Loader	40			97.50	3,900	146.48	5,859	loader
C	14G grader	40			120	4,800	168.35	6,734	grader
D	Revegetation		13.3	acres	300.45	4,000	365.00	4,855	Tiller, disc, seeder, tractor
E	Safety & fencing		2500	lin. ft.	2.04	5,100	3.08	7,700	
F	Seed + fertilizer		13.3	acres	315.80	4,200	210.00	2,793	seed and fertilizer
G	mob/demob				0.00	0	Lump Sum	1,000	
H	Post mining monitoring				0.00	0	Lump Sum	3,600	3 yrs surveying and revegetation inspect.
	SUBTOTAL					27,000		40,449	
I	Contingency (10%)					2,700		4,045	
	TOTAL					29,700		44,494	

Current bond being held 34,400

NOTE 1	equipment	equip \$/hr	Means 2002 ref	operator \$/hr	labor \$/hr		total	
	dozer D-7	121.86	01590-200-4260	31.20	44.65		197.71	
	loader Cat 950	70.63	01590-200-4730	31.20	44.65		146.48	
	grader Cat 14	92.50	01590-200-1920	31.20	44.65		168.35	
	backhoe	51.88	01590-200-0470	31.20	44.65		127.73	
	Operator rate includes fringes- Means 2002 page 355							
	Labor rate escalated from 1985 rate of 29.25 to 2002 rate of 44.65 using Means cost index page 419							
NOTE 2	Fencing costs based on the average of three vendor estimates obtained on 1/23/02, Mountain States Fence , First Fence Co., and Western Fence Co.							
NOTE 3	Revegetation includes drill seeding (\$205/acre) and mulching (\$160/acre). These rates are from current DOGM rate sheet.							
	Seed cost was obtained from Granite Seed Co (\$120/acre)							
	fertilizer (\$90/acre) was obtained from the current DOGM rate sheet.							
	All revegetation work should be accomplished in the fall.							
NOTE 4	10% Contingency added to Little Mountain estimate. It was suggested on DOGM rate sheet.							
NOTE 5	Mobilization & demobilization added to both estimates. \$1000 per DOGM rate sheet.							
NOTE 6	Post mining monitoring consisted of 3 years slope stability monitoring @ \$800 per year. In addition, \$1,200 for revegetation inspection and report at end of three years.							

# RECLAMATION SURETY ESTIMATE

Lone Star, Inc

Little Mountain Quarry

M/045/005

Prepared by Utah State Division of Oil, Gas & Mining

last revision

04/01/02

filename M045-005 WB2

page "estimate D7"

Tooele County

-This bond calculated using unit and labor costs furnished by JBR Environmental Consultants, Inc.

Note: actual unit costs may vary according to site conditions last unit cost update 02-Aug-00

-Amount of disturbed area which will receive reclamation treatments = 20 acres

-Estimated total disturbed area for this mine = 20 acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	0	sum	200	0	
Clean-up & removal of structures	40	hours	344	13768	
Backfill, grading, recontouring	24	hours	366	8786	
Topsoil redistribution	8	hours	147	1172	
Safety & fencing	4500	lf	3 08	13860	
Revegetation	20	acres	365	7300	
Broadcast seeding & fertilizer	20	acres	210	4200	
Post mining monitoring	1	lump sum	3600	3600	
Equipment mobilization	1	equip	1000	1000	
Reclamation supervision	4	days	386	1544	
		Subtotal		55230	
10% Contingency				5523	
		Subtotal		60753	
Escalate for 5 years at 2.82% per year				9063	
		Total		69817	

Rounded surety amount in year 2007 \$

69800

Average cost per disturber acre =

3491

**RECLAMATION SURETY ESTIMATE**

Lone Star Industries, Inc

Quarry Antone

M/045/021

Prepared by Utah State Division of Oil, Gas &amp; Mining

last revision

04/02/02

filename M045-021 WB2

page "estimate D7"

Tooele County

-This bond calculated using unit and labor costs furnished by JBR Consultants, Inc.

**Note: actual unit costs may vary according to site conditions** last unit cost update 02-Aug-00

-Amount of disturbed area which will receive reclamation treatments = 13.3 acres

-Estimated total disturbed area for this mine = 13.3 acres

Activity	Quantity	Units	\$/unit	\$	Note
Safety gates, signs, etc. (mtls & installation)	0	sum	200	0	
Dozer	40	hours	197.71	7908.4	
Cat 950 Loader	40	hours	146.48	5859	
14G Grader	40	hours	168.35	6734	
Regrading facilities areas (1 ft depth)	0	acre	502	0	
Revegetation	13.3	acre	365	4855	
Safety & Fencing	2500	lf	3.08	7700	
Seed & Fertilizer	13.3	acres	210	2793	
Post Mining Monitoring	1	lump sum	3600	3600	
Equipment mobilization	1	equip	1000	1000	
Reclamation supervision	4	days	386	1544	
		Subtotal		39449	
10% Contingency				3945	
		Subtotal		43394	
Escalate for 5 years at 2.82% per year				6474	
		Total		49868	

Rounded surety amount in year 2007 \$

49900

Average cost per disturber acre =

3749